

REMARKS

The Final Office Action mailed July 27, 2005 has been carefully reviewed and the following remarks are made in consequence thereof.

Claims 1-32 are now pending in this application. Claims 22-32 stand rejected. Claims 1-21 are allowed.

In accordance with 37 C.F.R. 1.136(a), a three month extension of time is submitted herewith to extend the due date of the response to the Office Action dated July 27, 2005 for the above-identified patent application from October 27, 2005 through and including January 27, 2006. In accordance with 37 C.F.R. 1.17(a)(3), authorization to charge a deposit account in the amount of \$1020.00 to cover this extension of time request also is submitted herewith.

The rejection of Claims 22-32 under 35 U.S.C. §112, first paragraph is respectfully traversed.

Applicants respectfully submit that Claims 22-32 are enabling to facilitate calcification scoring using a first image of a heart at a first phase of a cardiac cycle and a second image of the heart at a different second phase of the cardiac cycle to determine a difference image.

With respect to the assertion that the original specification does not reasonably enable any person skilled in the art to which it pertains, or with it is most nearly connected, to practice the invention commensurate in scope with the instant claims, 35 U.S.C. §112, first paragraph states the specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same. Applicants respectfully submit that the original specification sets forth the manner and process of making and using the invention, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same. Moreover, Applicants respectfully submit that the original specification describes exemplary methods of carrying out the invention and is not so limited as to preclude using other images in practicing the invention.

With respect to the assertion that the specification, while being enabling for calcification scoring from CT scout images, does not reasonably enable calcification scoring from any and all other types of images, Applicants respectfully submit that the specification does in fact provide reasonable enablement for calcification scoring for cardiac images as the original specification does not preclude using images other than scout scan CT data in practicing the invention. Moreover, there is no requirement for provide enablement for calcification scoring from any and all other types of images. Rather, as is recited in the MPEP, section 2163.02, the subject matter of the claim need not be described literally (i.e. using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement. Accordingly, Applicants submit that Claims 22-32 satisfy the requirements of Section 112, first paragraph, and for this reason alone, request the Section 112 rejections of Claims 22-32 be withdrawn.

In addition, with respect to the assertion that the “coronary” images referred to by applicant that appear at page 1, lines 2 – 3, the specification are delineated therein as subtypes of computer tomography images, at page 1, lines 2 - 3 the specification recites that the “invention relates generally to methods and apparatus for cardiac CT imaging, and more particularly methods and apparatus that minimize an impact of heart motion in collecting calcification data from coronary images.” As such, one of ordinary skill in the art would understand the term “coronary images” to be a broad term that can include all cardiac CT images including CT scout images, and would, not understand “coronary images” to be a subtype limited to CT scout images. The reissue permits Applicants to correct a defect of the original patent that resulted from Applicants not claiming all they had a right to claim. Although the original specification describes an exemplary embodiment wherein scout scan CT data is used to describe the best mode of the invention, the original specification should not be so limited as to preclude using other images to accomplish the invention. Specifically, for example, on page 2, lines 17-23, (emphasis added) that:

[i]t would therefore be desirable to provide methods and apparatus that overcome motion-induced artifacts produced in images acquired by CT imaging systems having relatively slow scanning and detection systems such as rotating gantries. **It would also be desirable to provide cardiac calcification scoring methods and apparatus utilizing such CT imaging systems.** It would further be desirable to provide methods and apparatus that can readily identify and score calcification from the small incremental x-ray attenuation produced by small amounts of calcification.

Accordingly, the original specification provides enablement for coronary images and is not limited to CT scout scan images. For the reasons set forth above, Applicants respectfully request that the Section 112 rejection of Claims 22-32 be withdrawn.

The Federal Circuit has opined in Verve LLC v. Crane Cams, Inc., 65 USPQ 2d 1051, 1053-1054 (Fed. Cir. 2002), that “[p]atent documents are written for persons familiar with the relevant field; the patentee is not required to include in the specification information readily understood by practitioners, lest every patent be written as a comprehensive tutorial and treatise for the generalist, instead of a concise statement for persons in the field.” Applicants respectfully submit that one of ordinary skill in the art, after reading the specification in view of the Figures, would agree that the subject matter in the specification is described in such a manner as to reasonably enable any person skilled in the art of patient imaging to practice the invention commensurate in scope with the instant claims. Accordingly, Applicants submit that Claims 22-32 meet the requirements of section 112, first paragraph. As such, for the reasons set forth above, Applicants respectfully request that the Section 112 rejection of Claims 22-32 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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